CLAIMS

What is claimed is:

1. An antenna device comprising:

a reflector; and

a receiver facing one side of the reflector,

wherein the one side of the reflector is provided with a plurality of different lens shapes selectively reflecting radio waves with particular frequency ranges to the receiver from among radio waves transmitted toward the reflector, the radio waves reflected by the plurality of different lens shapes including different frequency ranges.

2. A method of manufacturing an antenna device including a reflector and a receiver facing one side of the reflector, the method comprising the steps of:

forming a mask pattern with a particular shape on one side of a predetermined substrate;

etching the mask pattern and the substrate so that the one side of the substrate has the particular shape of the mask pattern; and

forming a reflecting film on the one side of the substrate having the particular shape,

wherein the particular shape includes a plurality of different lens shapes selectively reflecting radio waves with particular frequency ranges to the receiver from among radio waves transmitted toward the reflector, the radio waves reflected by the plurality of different lens shapes including different frequency ranges.

3. A method of manufacturing an antenna device including a reflector and a receiver facing one side of the reflector, the method comprising the steps of:

molding a substrate whose one side has a particular shape with an injection molding machine; and

forming a reflecting film on the one side of the substrate having the particular shape,

wherein the particular shape includes a plurality of different lens shapes selectively reflecting radio waves with particular frequency ranges to the receiver from among radio waves transmitted toward the reflector, the radio waves reflected by the plurality of different lens shapes including different frequency ranges.

4. An antenna device comprising:

a reflector; and

a receiver receiving reflected radio waves from one side of the reflector,

wherein the one side of the reflector includes a plurality of lenses, the plurality of lenses including at least a first lens with a first radio wave reflective characteristic and a second lens with a third radio wave reflective characteristic, the first and second radio wave reflective characteristics being different to selectively reflect radio waves with particular frequency ranges to the receiver.

5. The antenna device of claim 4 further comprising:

a third lens having a third radio wave reflective characteristic which is different from the first and second radio wave reflective characteristics to selectively reflect radio waves with particular frequency ranges to the receiver.

6. The antenna device of claim 5 further comprising:

a fourth lens having a fourth radio wave reflective characteristic which is different from the first, second and third radio wave reflective characteristics to selectively reflect radio waves with particular frequency ranges to the receiver.

7. The antenna device of claim 6 further comprising:

an array of each of said first, second, third, and fourth lenses on the one side of the reflector.

8. The antenna device of claim 6 wherein the first, second, third, and fourth radio wave reflective characteristics are defined according to at least one of the diameter, depth, and cross-sectional profile of the first, second, third, and fourth lenses.